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Short report

Thoracic injuries resulting from intimate partner violence

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ABSTRACT

Intimate partner violence affects individuals in every part of the world regardless of financial status, age, race, religion, nationality and educational background. Women are often the victims of assault by their partners and their presence in emergency departments is well documented. This report highlights the relatively infrequent occurrence of a traumatic pneumothorax as a result of intimate partner physical abuse and aims to emphasize the crucial role all health care professionals need to play if domestic violence is to be recognized early.

1. Introduction

"He, who loves well, punishes well". This short phrase by *J.J.* Grandville contains the alibi some abusers seek to find in order to ease their guilty consciousness. Although the term "intimate partner abuse" also contains sexual, emotional, economic or verbal abuse, it is the physical one that threatens the life of the victim and is, sometimes, the most recognizable.

2. Case presentation

A 42-year-old female presented to the Accident and Emergency department with shortness of breath and severe pain on the left side of the chest. Allegedly, she lost her balance and fell down a flight of stairs at home. On inspection, there were bruises on the chest as well as recent hematomas in both arms. Auscultation revealed decreased breath sounds on the left hemithorax. A chest x-ray documented fractures of the 6th, 7th and 8th ribs and a pneumothorax on the left. This had been treated with the insertion of a chest drain. During the procedure, another small, recent-looking scar was noted close by on the chest wall. The patient reluctantly admitted that she had been treated for a similar injury about a month earlier. The scar was from the previous chest drain insertion. The patient blamed her "bad luck" for the two episodes of traumatic pneumothorax, having, allegedly, fallen down a flight of stairs on both occasions. Following the insertion of the chest tube the lung re-expanded and the patient had an uneventful recovery. She was discharged on the 7th day. Several days later she was readmitted having suffered ocular trauma and multiple facial injuries. This alerted the medical staff and, after specific interrogation, the patient, finally, confessed her marital problems and named her husband as her physical abuser. Poor communication, tension, constant fear of her partner's outbursts, violent and abusive behavior was her daily reality. The two episodes of pneumothorax were the result of domestic violence during which she was repeatedly battered by her husband. The patient was of low economical and educational status and lived in a rural area.

3. Discussion

Medical professionals can and should make a difference in the lives of those who suffer abuse[1] They are in position to empower people, give precious piece of advice, and refer them to appropriate services. But do they possess the right training and skills to deal with such circumstances? It is not an understatement to admit that we, as thoracic surgeons, are, perhaps, inadequately trained to manage such cases in an holistic manner. Had we suspected the true cause of the patient's injury, she would have been saved from further physical suffering. Women are frequently the subject of domestic violence. This affects as many as 44% of women in their adult life[2] The negative health consequences of intimate partner violence are well-documented. Moreover, women who experience

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any pattern of physical violence are susceptible to a wide range of negative psychosocial outcomes[3] Recent studies have also revealed that when compared to women not previously been abused, women with a history of intimate partner violence had an increased risk of psychosocial and mental health diagnoses, increased risks of clinically identified substance abuse, family and social problems, depression, anxiety, neuroses and tobacco use.[4,5] Therefore, doctors and nurses working in emergency departments need to be vigilant for intimate partner violence and to be trained in suspecting and recognizing such patterns of violence. Easy access to a psychologist or a social worker, even out of hours, would also be beneficial. These specialists are not only capable of recognizing the abuse but they can also offer valuable assistance in terms of providing substantial support in the wounded female psychology. A close follow-up of the victims regarding the evaluation of their psychological substrate is also imperative. Although the prevention of intimate partner violence is a major public health priority, little is known about how to prevent this form of violence. The implementation of partner violence prevention programs is a very encouraging step towards this direction[6]

A pneumothorax may pose a major stress for the patient causing respiratory and circulatory imbalance. The therapeutic effort should be focused on immediate lung re-expansion, on providing pain relief and preventing the delayed development of atelectasis or pneumonia in patients with painful chest wall injuries. To our knowledge the incidence of traumatic pneumothorax as a result of intimate partner violence is not documented in the literature. There is no doubt that such episodes are underreported as patients do not come easily forward due to intimidation and vulnerability. According to a recent study, the incidence of pneumothorax during domestic accidents is approximately 6%[7] However, what percentage of this can be attributed to intimate partner violence remains unclear.

4. Conclusions

In brief, although we had successfully treated a case of traumatic pneumothorax by means of chest drainage, we still failed to identify the actual underlying cause and the true nature of the patient's problem. Doctors have the ethical responsibility to recognize an abused patient and are bound by the oath of Hippocrates to assist those in need. A high index of suspicion of intimate partner violence is of paramount importance if such cases are to be spotted early and further violence is to be prevented. A traumatic pneumothorax due to fractured ribs may rarely be the first clue to a suspected case of domestic violence. Emergency physicians and nurses, as well as thoracic surgeons, should all be aware of such a possibility.

Disclosure statement

The authors declare that they have no competing financial interests.

Authors' contributions

All authors have read and approved the final manuscript. The manuscript is not under consideration and has not been published by another journal.

Conflict of interest

The authors declare that they have no conflicts of interest in regard to this article.

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References

1. Reijnders UJ, Giannakopoulos GF, de Bruin KH. Assessment of abuse-related injuries: a comparative study of forensic physicians, emergency room physicians, emergency room nurses and medical students. *J Forensic Leg Med* Jan 2008; **15**(1):15–9.
2. Thompson RS, Bonomi AE, Anderson M, Reid RJ, Dimer JA, Carrell D, et al. Intimate partner violence: prevalence, types, and chronicity in adult women. *Am J Prev Med* 2006;**30**(6):447–57.
3. Ansara DL, Hindin MJ. Psychosocial consequences of intimate partner violence for women and Men in Canada. *J Interpers Violence*; May 25 2010 [Epub ahead of print].
4. Bonomi AE, Anderson ML, Reid RJ, Rivara FP, Carrell D, Thompson RS. Medical and psychosocial diagnoses in women with a history of intimate partner violence. *Arch Intern Med* Oct 12 2009;**169**(18):1692–7.
5. Kelly U. Intimate partner violence, physical health, posttraumatic stress disorder, depression, and quality of life in latinas. *West J Emerg Med* Aug 2010;**11**(3):247–51.
6. Temple JR, Stuart GL, O'Farrell TJ. Prevention of intimate partner violence in substance-using populations. *Subst Use Misuse* 2009;**44**(9–10):1318–28.
7. Bergaminelli C, De Angelis P, Gauthier P, Salzano A, Vecchio G. Thoracic drainage in trauma emergencies. *Minerva Chir* Oct 1999;**54**(10):697–702.